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EXAMINER

WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
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2626

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/670,126	Applicant(s) PETTAY ET AL.	
	Examiner JAMES S. WOZNAK	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the office action from 12/9/2008, the applicant has submitted a Request for Continued Examination (*RCE*), filed 2/9/2009, amending independent claims 1, 23, 44, and 68-69, while arguing to traverse the art rejection based on the examiner's reasons for combining the prior art of record (*Amendment, Pages 15-16*) and the limitation regarding the claimed confidence level threshold (*Amendment, Pages 17-19*). Applicant's arguments have been fully considered, however the previous rejection is maintained due to the reasons listed below in the response to arguments.

2. In response to amended claim 11, the examiner has withdrawn the previous 35 U.S.C. 112, Second Paragraph rejection directed to indefinite claim language.

3. In response to amended claims 1, 12, and 23, the examiner has withdrawn the previous objections directed towards minor informalities.

Response to Arguments

4. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

On Pages 15-16 of the applicants' amendment, the applicants first argue that in combining the teachings of the prior art of record and determining what constitutes analogous art, the examiner has not considered the invention as a whole. In response, the examiner notes that the applicant's invention has been fully considered and is related to the fields of speech recognition and customer service agent analysis (*see Specification, Page 2, Lines 1-7*). In the previous Office Action from 12/9/2008 (*Pages 3-5*), it was explained in detail why the applied prior art is analogous and pertinent to the applicant's invention. The examiner again points out MPEP 2141 (II)(A) which states that:

Office personnel are reminded that, for purposes of 35 U.S.C. 103, prior art can be either in the field of applicant's endeavor or *be reasonably pertinent to the particular problem with which the applicant was concerned*. Furthermore, prior art that is in a field of endeavor other than that of the applicant (as noted by the Court in KSR, "[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one", 550 U.S. at ___, 82 USPQ2d at 1396 (emphasis added)), or solves a problem which is different from that which the applicant was trying to solve, may also be considered for the purposes of 35 U.S.C. 103. (The Court in KSR stated that "[t]he first error...in this case was...holding that courts and patent examiners should look only to the problem the patentee was trying to solve. The Court of Appeals failed to recognize that the problem motivating the patentee may be only one of many addressed by the patent's subject matter...The second error [was]...that a person of ordinary skill attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem." 550 U.S. at ___, 82 USPQ2d at 1397. Federal Circuit case law prior to the Supreme Court's decision in KSR is generally in accord with these statements by the KSR Court. See e.g., *In re Dillon*, 919 F.2d 688, 693, 16 USPQ2d 1897, 1902 (Fed. Cir. 1990) (en banc) ("[I]t is not necessary in order to establish a prima facie case of obviousness that both a structural similarity between a claimed and prior art compound (or a key component of a composition) be shown and that there be a suggestion in or expectation from the prior art that the claimed compound or composition will have the same or a similar utility as one newly discovered by applicant"); *In re Lintner*, 458 F.2d 1013, 1018, 173 USPQ 560, 562 (CCPA 1972) ("The fact that [applicant] uses sugar for a different purpose does not alter the conclusion that its use in a prior art composition would be prima facie obvious from the purpose disclosed in the references.")).

It is noted that each of the prior art references is reasonably pertinent to the applicants' invention for the reasons listed on Pages 10, 16-20, and 24-25 of the Office Action from 12/9/2008. For example, the prior art references are directed to at least one of the following: speech recognition analysis of a script reading, customer service analysis/monitoring systems, or customer service analysis systems employing speech recognition. As was pointed out above, the

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applicants' invention is directed to customer service agent analysis and speech recognition.

Since all of the provided prior art references fall in at least one of these fields, the prior art of record not only is pertinent to the applicants' invention, but are also considered to be from similar fields of endeavor. Thus, these arguments have been fully considered, but are not convincing.

In response to the applicants' argument that the examiner has relied upon conclusive statements and hindsight reasoning in setting forth the 35 U.S.C. 103(a) rejections (*Amendment, Page 16*), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation for combining the prior art of record is found in the references themselves (*see Pages 10, 16-20, and 24-25 of the Office Action from 12/9/2008*). In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Thus, these arguments have been fully considered, but are not convincing.

In response to the applicants' allegation that the examiner's analogous art analysis is contradictory (*Amendment, Page 16*), the examiner points out that the prior art references are directed to at least one of the following: speech recognition analysis of a script reading, customer service analysis/monitoring systems, or customer service analysis systems employing speech recognition. The references combined in the prior art rejections at least share one or more of the features of these fields that are pertinent to the applicants invention and this was consistently detailed in each ground of rejection (*Pages 10, 16-20, and 24-25*). Thus, this argument has been fully considered, but is not convincing.

Turning now to the applicants' arguments directed towards the independent claims and limitations therein regarding the confidence level thresholds, the applicants argue that the examiner has ignored this limitation and provides detailed arguments as to why Walker et al (*U.S. Patent: 6,567,787*) fails to teach this limitation (*Amendment, Pages 17-18*). More specifically, the applicants argue that the cited portions of Walker are directed to confidence levels relating to an agent's level of compliance rather than confidence levels belonging to an automatic speech recognition (ASR) component and further argues that Walker fails to teach the static or varying standard that has been added to the claims in the present amendment (*Amendment, Pages 18-19*).

In response, the examiner notes that this limitation was specifically addressed in the prior Office Action from 12/9/2008. More specifically, it was previously pointed out that Walker taught this limitation in the form of his various speech recognition evaluation criteria decisions linked to the likelihood of speaking a word/phrase properly (*Col. 6, Lines 24-39; Col. 7, Line 45-Col. 8, Line 15; Col. 10, Lines 15-23; and Col. 13, Lines 4-27*). In Col. 6, Lines 4-39 Walker

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discloses evaluation criteria based on if a user has spoken a verbal message correctly. These criteria are based on a result of a speech recognition process, which as is recited in this passage, involves the use of voice files. Col. 7, Line 45- Col. 8, Line 15 further describes this comparison. Here, Walker recites that speech from a user is recorded, compared to a stored prompt voice file, and analyzed with respect to well known speech recognition criteria to determine whether a user has spoken an intended prompt. This comparison between a recorded user voice signal is further detailed in Col. 10, Lines 15-23. Speech recognition, as is taught by Walker, is a process that compares a recorded user voice to a stored prompt voice file which corresponds to what the user should be speaker. The well known speech recognition algorithms employed in Walker necessarily involve determining a degree to which a recorded voice matches the stored voice prompt. These degrees would involve confidence measures in the form of a score or likelihood. In Col. 7, Line 45- Col. 8, Line 15, Walker discloses that various criteria are used for determining if a user complied to a script, or in other words, if their recorded speech matches/does not match a stored prompt voice file to an acceptable degree. Thus, the cited passages of Walker do relate to confidence levels of a speech recognizer and the applicants' arguments have been fully considered, but are not convincing. Also, as per the cited passages of Walker, these criteria thresholds are predetermined (*i.e., static*). Thus, the added claim amendment does not overcome the teachings of Walker. Finally, it is of note that the presently optional variable confidence level thresholds are described in the specification as being different required recognition accuracies which are assigned to each of the different script panels (*Specification, Page 15*). Although Walker in Col. 7, Line 45- Col. 8, Line 15 teaches varying assigned prompt difficulties, Walker does not appear to explicitly indicate that specific different

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required recognition thresholds are assigned to each prompt panel. Thus, it is recommended that the applicants amend the claims to clarify the thresholds as *only being variable ASR confidence scores that vary with regard to the particular script portion under analysis* because such an amendment may overcome the prior art of record.

The art rejections of the further dependent claims are traversed for reasons similar to the independent claims (*Amendment, Page 20*). In regards to such arguments, see the response directed towards the independent claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-5, 8-10, 12-24, 28, 30-38, and 41-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al (*U.S. Patent: 6,567,787*) in view of Brockman et al (*U.S. Patent: 5,826,240*).

With respect to **Claim 1**, Walker discloses:

Conducting at least one voice interaction between the at least one agent and the at least one client, wherein the at least one agent follows the at least one script via at least one of a plurality of panels (*recording a spoken interaction between a customer and a service agent, wherein the agent reads from a script to conduct the interaction, Col. 7, Lines 10-60; and*

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evaluating an interaction for a plurality of voice message segments, Col. 5, Line 46- Col. 6, Line 39; and Fig. 6);

Entering information by the at least one agent according to response obtained from the at least one client during the voice interaction (*agent enters prompt information into the system based on client response, Col. 11, Lines 7-44);*

Logging the voice interaction as a portion of a log record (*Col. 5, Line 46- Col. 6, Line 39; Col. 6, Lines 53-66; and recording an audio interaction, Col. 7, Lines 1-60);*

Based on the logging, evaluating the at least one voice interaction with at least one automatic speech recognition component adapted to analyze the at least one voice interaction (*interaction evaluation through speech recognition, Col. 7, Line 45- Col. 8, Line 15; and Col. 13, Lines 4-27); and*

Determining via the confidence level thresholds of the at least one automatic speech recognition component and obtained using a score evaluated against a static or a varying standard whether the at least one agent has adequately followed the at least one script by using the evaluated at least one voice interaction (*evaluating the interaction through speech recognition and determining if the script was followed according to various predetermined evaluation criteria, Col. 6, Lines 24-39; and Col. 7, Line 45- Col. 8, Line 15; and various speech recognition predetermined evaluation criteria decisions linked to the likelihood of speaking a word/phrase properly, Col. 6, Lines 24-39; Col. 7, Line 45- Col. 8, Line 15; Col. 10, Lines 15-23; and Col. 13, Lines 4-27).*

Walker does not specifically disclose assigning time displacement timestamps to a plurality of prompt message panels during a voice interaction or panel-by-panel playback,

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however, Brockman recites a means for recording time stamps in a transaction log during a seller-client interaction that indicate an elapsed time point of a particular step (*i.e., panel*) in an interaction (*i.e., time displacement*) as well as the duration of the interaction step (*Col. 7, Lines 29-49; Col. 6, Lines 1-8; speech recognition processing means, Col. 5, Lines 47-55; recorded voice interactions, Col. 8, Lines 8-28; and selective playback of certain time-stamped steps, Col. 7, Lines 29-49; and Col. 8, Lines 8-28*).

Walker and Brockman are analogous art because they are from a similar field of endeavor in customer service analysis systems using speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Walker with the time stamps taught by Brockman in order to permit a manager to confirm with reasonable confidence that the seller is performing appropriate steps at specific times (*Brockman, Col. 7, Lines 35-39*).

With respect to **Claim 2**, Walker discloses the method wherein the live agent is a telemarketing agent (*Col. 5, lines 40-45*).

With respect to **Claim 3**, Walker discloses the method wherein the script includes an offer of goods (*figure 6 and Col. 11, lines 30-44*).

With respect to **Claim 4**, Walker discloses the method wherein said voice interaction is carried on a communications network (*Col. 3, Lines 40-56; and Col. 5, Lines 41-45*).

With respect to **Claim 5**, Walker discloses the method wherein said communications network is a publicly switched telephone network (*telephone line, Col. 3, line 52; and Col. 5, Lines 41-45*).

With respect to **Claim 8**, Walker discloses the method the voice interaction is a telephone call (*Col. 5, lines 40-45*).

With respect to **Claim 9**, Walker discloses the method wherein said live customer client initiates said telephone call (*telephone ordering, Col. 5, lines 40-45 with Col. 12, lines 63-65*).

With respect to **Claim 10**, Walker discloses the method wherein the telephone call is initiated by an entity other than the at least one client (*telemarketing, Col. 5, Lines 40-45*).

With respect **Claim 12**, Walker discloses the method further comprising the step of: performing an action based (*bonus earned*) upon a determination obtained from said evaluating step (*Col. 6, lines 24-39*).

With respect to **Claim 13**, Walker discloses the method but wherein performing an action comprises transmitting a signal (*audio signal transmitted*) to said live agent corresponding to said determination (*Col. 9, line 59 – Col. 10, line 5*).

With respect to **Claim 14**, Walker discloses:

Performing an action comprises transmitting a signal to a reviewing authority corresponding to said determination (*billing system in communication with an operator database, Col. 6, Lines 24-39*).

With respect to **Claim 15**, Walker recites:

Performing an action comprises causing an entry to be made in a script compliance incentive system (*operator database, Col. 5, Line 46- Col. 6, Line 39*).

With respect to **Claim 16**, Walker discloses the method comprising: reviewing the determination of whether the at least one agent has adequately followed the at least one script (*bonus based on script compliance percentage, Col. 6, lines 24-28*).

With respect to **Claim 17**, Walker discloses the method wherein the score (*percentage; Col. 6, lines 24-28*) is assigned by the automatic speech recognition component (*SCRAPI; Col. 8, lines 6-11*).

With respect to **Claim 18**, Walker discloses:

Evaluating a plurality of panels (*evaluating an interaction for a plurality of voice messages, Col. 5, Line 46- Col. 6, Line 39; and Fig. 6*).

With respect to **Claim 19**, Walker discloses:

Assigning a respective score to each one of the panels (*score associated with a recited voice message, Col. 6, Lines 24-39*).

With respect to **Claim 20**, Walker further discloses:

Comparing data representing an actual duration of at least one interaction, wherein the at least one agent reads at least one script to the at least one client, to data representing an expected duration parameter associated with the at least one interaction (*time period during which a message should be spoken by an agent, Col. 8, Line 63- Col. 9, Line 15*).

With respect to **Claims 21-22**, Walker further discloses:

Disposition at least one interaction, wherein the at least one agent reads at least one script to the at least one client, based at least in part on a comparison of data representing an actual duration of the at least one interaction to data representing an expected duration parameter associated with the at least one interaction (*determining if a displayed message is recited in a specific duration and if not providing a reprompt to an agent, Col. 8, Line 13- Col. 9, Line 35*).

Claim 23 contains subject matter similar to Claims 1 and 12, and thus, is rejected for the same reasons. Walker also discloses system implementation in a telemarketing environment (*Col. 5, Lines 41-45*).

With respect to **Claim 24**, Walker discloses:

The communication network comprises at least one long distance telephone network (*remote communication media comprising telephone line; and telemarketing, Col. 3, Lines 40-56; and Col. 5, Lines 41-45*).

Claim 28 contains subject matter similar to Claim 2, and thus, is rejected for the same reasons.

With respect to **Claim 30**, Walker further discloses:

Transmitting at least one signal to the at least one agent (*transmitting a message to an agent, Col. 13, Lines 4-27*).

Claim 31 contains subject matter similar to Claim 14, and thus, is rejected for the same reasons.

Claim 32 contains subject matter similar to Claim 15, and thus, is rejected for the same reasons.

With respect to **Claim 33**, Walker discloses:

Identifying at least one instance of non-compliance with the script, wherein the agent did not adequately follow the script during at least one interaction (*identifying incorrectly spoken messages, Col. 6, Lines 24-39; and Col. 13, Lines 11-27*).

With respect to **Claim 34**, Walker further discloses:

Obtaining a voice record of at least a portion of at least one voice interaction (*recorded speech from an agent, Col. 7, Lines 45-60*).

With respect to **Claim 35**, Walker further discloses:

Obtaining a least a portion of a voice record of at least a portion of a suggested interaction that is related to the at least one instance of non-compliance (*obtaining a prompt message for comparison with a voice interaction, Col. 7, Line 46- Col. 8, Line 15; and Col. 9, Lines 16-35*).

With respect to **Claim 36**, Walker further discloses:

Obtaining at least a portion of a pre-recorded voice record (*obtained voice is recorded prior to analysis, Col. 4, Lines 34-55; and Col. 7, Line 45- Col. 8, Line 15*).

With respect to **Claim 37**, Walker further discloses:

Recording at least a portion of a second interaction as the further voice record after identifying that at least one instance of non-compliance (*obtaining additional messages spoken incorrectly in determining an appropriate action, Col. 6, Lines 24-39*).

With respect to **Claim 38**, Walker further discloses:

Providing at least the portion of the voice record of the at least one voice interaction and the voice record of the suggested interaction to the agent (*differences between agent interaction and a suggested interaction, Col. 13, Lines 11-27*).

With respect to **Claim 41**, Walker further discloses:

Directing the agent to remedial materials related to improving performance of the agent (*directing an agent's attention to correct prompts/phrases/words that will improve performance, Col. 13, Lines 4-27; and Col. 16, Lines 29-33*).

With respect to **Claim 42**, Walker further discloses:

Providing the agent with data representing at least one aspect in which the agent's handling of at least one interaction was deficient (*Col. 13, Lines 4-27; and Col. 16, Lines 29-33*).

7. **Claims 6-7, 25-27, and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al in view of Brockman et al and further in view of Stuart et al (*U.S. Patent: 6,868,154*).

With respect to **Claim 6**, Walker in view of Brockman discloses the method/system for evaluating a voice interaction between a telemarketing agent and a customer, as applied to Claim 1. Walker in view of Brockman does not specifically suggest communication over the Internet, however, Stuart recites communications between a calling party and a service agent, conducted over the Internet (*Col. 6, Lines 52-64*).

Walker, Brockman, and Stuart are analogous art because they are from a similar field of endeavor in customer service systems utilizing speech recognition. It would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Walker in view of Brockman with Internet-based customer communication scheme taught by Stuart in order to expand upon the available networks taught by Walker, thus providing an alternate and well-known means of connecting a calling party to an agent (*Stuart, Col. 6, Lines 43-64*).

With respect to **Claim 7**, Stuart further discloses wireless communication between a calling party and an agent (*Col. 6, Lines 52-64; and Col. 11, Lines 45-47*).

Claim 25 contains subject matter similar to Claim 6, and thus, is rejected for the same reasons.

With respect to **Claim 26**, Stuart further discloses workstations for a plurality of agents (*Col. 6, Line 52- Col. 7, Line 30*).

With respect to **Claim 27**, Stuart further discloses an agent input device for communicating over a telephone network and a workstation terminal (*Col. 6, Lines 52-64*).

With respect to **Claim 29**, Stuart further discloses a plurality of customer service agents (*Col. 6, Lines 43-64*).

8. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al in view of Brockman et al and further in view of Rtischev et al (*U.S. Patent: 5,634,086*).

With respect to **Claim 11**, Walker in view of Brockman et al discloses the method/system for evaluating a voice interaction between an agent and a customer utilizing speech recognition, as applied to Claim 1. Walker further discloses providing a voice interaction script compliance module accessible via a user interface terminal and a communication network including a telephone or wireless network (*Col. 3, Lines 23-56; and Fig. 1*). Although Walker discloses comparison of a spoken input to a vocabulary containing words and phrases (*Col. 7, Line 66- Col. 8, Line 15*) and conversion of an input audio signal (*Col. 4, Lines 23-33*), Walker in view of Brockman et al does not explicitly teach the conversion of input speech into a digital signal comprising at least one spectral representation, however, Rtischev discloses such a conversion process:

Converting data representing the voice interaction into a digital signal comprising a spectral representation of the voice interaction (*Col. 1, Lines 44-54; Col. 4, Lines 51-58; and Col. 5, Lines 4-27*);

Comparing the digital signal to a reference standard comprising a known vocabulary
(*Col. 5, Lines 4-27*); and

Matching the digital signal to words and phrases contained in the reference standard (*Col. 5, Line 4- Col. 6, Line 5*).

Walker, Brockman and Rtischev are analogous art because they are from a similar field of endeavor in recognizing speech corresponding to a script reading. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Walker in view of Brockman et al with the speech input conversion means taught by Rtischev in order to provide pre-processing used to implement speech recognition in Walker (*Walker Col. 7, Line 66- Col. 8, Line 15*).

9. **Claims 39 and 43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al in view of Brockman et al and further in view of Blair (*U.S. Patent: 7,203,285*).

With respect to **Claim 39**, Walker in view of Brockman discloses the method/system for evaluating a voice interaction between an agent and a customer utilizing speech recognition, as applied to Claim 35. Walker in view of Brockman does not specifically suggest that given and suggested voice interactions are converted to a different format, however Blair discloses converting such voice interactions into a GUI screen format (*Col. 6, Lines 37-46; and Col. 12, Line 56- Col. 13, Line 12*).

Walker, Brockman, and Blair are analogous art because they are from a similar field of endeavor in customer/agent interaction utilizing speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings

of Walker in view of Brockman with the fault-finding GUI taught by Blair in order to better improve business processes, train agents, and identify problems (*Blair, Col. 3, Lines 31-35*).

With respect to **Claim 43**, Blair discloses the GUI as applied to Claim 39 and further notes that mistakes in a call flow are highlighted (*Col. 5, Lines 15-19*).

10. **Claim 40** is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al in view of Brockman et al and further in view of Macleod Beck et al (*U.S. Patent: 6,910,072*).

With respect to **Claim 40**, Walker in view of Brockman discloses the method/system for evaluating a voice interaction between an agent and a customer utilizing speech recognition, as applied to Claim 35. Walker in view of Brockman does not specifically suggest a means for notifying an agent of performance via e-mail, however Macleod Beck discloses a means for emailing performance review data to an agent (*Col. 29, Lines 26-46*).

Walker, Brockman, and Macleod Beck are analogous art because they are from a similar field of endeavor in customer service systems utilizing speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Walker in view of Brockman with the email means taught by Macleod Beck in order to provide a means for directly providing an activity review that is only accessible by the intended agent (*Macleod Beck, Col. 29, Lines 26-46*).

11. **Claims 44-50, 52-54, 56-58, 62, 64, and 67-69** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarano et al (*U.S. Patent: 7,076,427*) in view of Katz (*WO 94/21084*) (*referenced in the parent application 09/785,048*) and further in view of Walker et al.

With respect to **Claims 44 and 69**, Scarano discloses:

Identifying at least one interaction handled by at least one agent, which interaction is deficient in at least one aspect (*identifying if a desired word/phrase/sequence is not detected, Col. 8, Lines 58-67*);

Obtaining a voice record of at least a portion of the at least one interaction (*indexed voice interaction, Col. 11, Lines 1-62; Col. 13, Lines 7-19*);

Obtaining a further voice record of at least a portion of at least a further pre-recorded interaction or a plurality of pre-recorded interaction, wherein the plurality of pre-recorded interactions are stored in a library or data store containing exemplary interactions by the at least one agent made available for future reference in which the at least one aspect is not deficient (*script adherence that identified the presence of required statements, Col. 8, Lines 58-67; Col. 9, Lines 22-32, which are stored in a searchable audio format library for future reference, Col.10, Line 60- Col. 11, Line 61*); and

Transmitting data representing at least the portions of the voice record and the further voice record to the at least one agent (*transmitting indexed call data and associated evaluations to a customer service representative client workstation, Col. 3, Lines 11-44; and Col. 11, Lines 1-62*).

Scarano does not specifically disclose storing a video recording of an interaction, however, Katz recites a telemarketing application in which an agent is monitored using audio and video recordings (*Pages 8, 24, and 27-29*).

Scarano and Katz are analogous art because they are from a similar field of endeavor in customer service monitoring. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Scarano with the video monitoring taught by Katz in order to implement more effective agent monitoring (*Katz, Pages 15-16*).

Scarano does teach confidence thresholds for speech recognition (*Col. 16, Lines 43-53*), but this subject matter was part of the applicants' parent application (*09/785,048*) (*filed on 2/15/2001*) (*see Col. 12, Lines 18-44 of corresponding U.S. Patent: 7,191,133*) *although not as part of this embodiment in claim 44*), which is prior to the date of Scarano such that Scarano will not be relied upon to teach this feature. Walker, however, recites:

Determining via the confidence level thresholds of the at least one automatic speech recognition component and obtained using a score evaluated against a static or a varying standard whether the at least one agent has adequately followed the at least one script by using the evaluated at least one voice interaction (*evaluating the interaction through speech recognition and determining if the script was followed according to various predetermined evaluation criteria, Col. 6, Lines 24-39; and Col. 7, Line 45- Col. 8, Line 15; and various speech recognition predetermined evaluation criteria decisions linked to the likelihood of speaking a word/phrase properly, Col. 6, Lines 24-39; Col. 7, Line 45- Col. 8, Line 15; Col. 10, Lines 15-23; and Col. 13, Lines 4-27*).

Scarano, Katz, and Walker are analogous art because they are from a similar field of endeavor in customer service monitoring. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Scarano in view of

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Katz with the ASR confidence thresholds taught by Walker in order to provide a more automated means for monitoring a customer service agent (*Walker, Col. 1, Lines 54-59*).

With respect to **Claim 45**, Scarano further recites:

Identifying at least one QA-related parameter applicable to at least one interaction involving the at least one agent (*quality control speech monitoring, Col. 10, Lines 33-46*).

With respect to **Claim 46**, Scarano further discloses:

Analyzing the at least one interaction against the at least one QA-related parameter (*analyzing a voice interaction for the presence of required statements, Col. 9, Lines 22-32; and Col. 10, Lines 33-46*).

With respect to **Claim 47**, Scarano further discloses:

Identifying at least one interaction wherein the at least one agent does not comply with at least part of a pre-defined script governing the at least one interaction (*identifying required statements as a part of script adherence monitoring, Col. 9, Lines 22-32; and Col. 10, Lines 33-46*).

With respect to **Claim 48**, Scarano further discloses:

Identifying at least one interaction wherein the at least one agent fails to correctly enter data provided by a third party into a computer based system (*order validation, Col. 10, Lines 33-46*).

With respect to **Claim 49**, Scarano further discloses:

Identifying at least one interaction wherein the at least one agent provides an incorrect response to a question from a third party (*compliance assurance in a customer service environment, Col. 10, Lines 19-46*).

With respect to **Claim 50**, Scarano further discloses:

Recording at least a portion of at least one interaction processed by at least one agent physically located at a call center (*call center having customer service representative (CSR) workstations, Col. 3, Lines 11-44*).

With respect to **Claim 52**, Scarano further discloses:

Obtaining a further voice record includes obtaining at least a portion of a pre-recorded interaction (*stored call audio data, Col. 7, Lines 28-35; and Col. 12, Lines 6-18*).

With respect to **Claim 53**, Scarano further discloses:

Accessing at least one data store containing data representing at least respective portions of a plurality of pre-recorded interactions (*accessing recorded audio files on a server, Col. 11, Line 12- Col. 12, Line 18*).

With respect to **Claim 54**, Scarano further discloses:

Recording at least a portion of a further interaction occurring subsequently to the at least one interaction (*multiple indexed voice interaction portions, Col. 9, Lines 9-21*).

With respect to **Claim 56**, Scarano further shows:

Transmitting to the at least one agent at least one screen shot representation of a computer screen related to the at least one interaction (*Fig. 17*).

With respect to **Claim 57**, Scarano further discloses:

Transmitting to the at least one agent data representing at least a portion of a pre-defined script with which the at least one agent failed to comply (*script adherence analysis, Col. 10, Lines 33-46; and Fig. 17*).

With respect to **Claim 58**, Scarano further discloses:

Transmitting to the at least one agent data representing information enter incorrectly by the at least one agent into a computer-based system (*order validation and provided call details, Col. 10, Lines 33-46; and Fig. 17*).

With respect to **Claim 62**, Scarano further discloses:

Converting the voice record into a format suitable for transmission to at least one agent physically located in a call center (*audio signal conversion, Col. 11, Lines 12-38*).

Claim 64 contains subject matter similar to Claim 62, and thus, is rejected for the same reasons.

With respect to **Claim 67**, Scarano further discloses:

Accessing a data store adapted to correlate respective portions of a pre-defined script governing at least a portion of the at least one interaction to respective fields in the data store that store respective suggested voice records corresponding to the respective portions of the script (*indexed audio recordings/script adherence, Col. 9, Line 22- Col. 10, Line 46*).

With respect to **Claim 68**, Scarano in view of Katz discloses the agent evaluation method, as applied to Claim 44, wherein Scarano discloses that such a method can be implemented as a program on a computer, which would inherently require some type of memory for program storage (*Col. 8, Lines 58-67*).

12. **Claims 51, 63, and 65** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarano et al in view of Katz in view of Walker et al and further in view of Eilbacher et al (*U.S. Patent: 6,724,887*).

With respect to **Claim 51**, Scarano in view of Katz in view of Walker discloses the method/system for evaluating a voice interaction between an agent at a call center and a customer utilizing speech recognition, as applied to Claim 50. Although well known in the art, Scarano does not explicitly disclose that an agent may be located remotely from a call center, however, Eilbacher discloses such a location of a call agent (*Col. 6, Lines 42-49*).

Scarano, Katz, Walker, and Eilbacher are analogous art because they are from a similar field of endeavor in customer service analysis systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Scarano in view of Katz in view of Walker with the remote agent location taught by Eilbacher in order to expand the range and number of available call agents using a well-known remote agent configuration that is interchangeable with a in-house agent (*Eilbacher, Col. 6, Lines 42-49*).

Claims 63 and 65 contain subject matter similar to Claims 51 and 62, and thus, are rejected for the same reasons.

13. **Claims 55 and 66** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarano et al in view of Katz in view of Walker et al and further in view of Macleod Beck et al (*U.S. Patent: 6,910,072*).

With respect to **Claim 55**, Scarano in view of Katz in view of Walker discloses the method/system for evaluating a voice interaction between an agent and a customer utilizing speech recognition, as applied to Claim 44. Scarano in view of Katz does not specifically suggest a means for notifying an agent of performance via e-mail, however Macleod Beck discloses a means for emailing performance review data to an agent (*Col. 29, Lines 26-46*).

Scarano, Katz, Walker, and Macleod Beck are analogous art because they are from a similar field of endeavor in customer service analysis systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Scarano in view of Katz in view of Walker with the email means taught by Macleod Beck in order to provide a means for directly providing an activity review that is only accessible by the intended agent (*Macleod Beck*, Col. 29, Lines 26-46).

Claim 66 contains subject matter similar to Claim 55 and 62, and thus is rejected for the same reasons.

14. **Claims 59-61** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarano et al in view of Katz in view of Walker et al and further in view of McIllwaine et al (*U.S. Patent: 6,324,282*).

With respect to **Claims 59-61**, Scarano in view of Katz in view of Walker discloses the method/system for evaluating a voice interaction between an agent and a customer utilizing speech recognition, as applied to Claim 44. Scarano in view of Katz in view of Walker does not specifically suggest providing remedial training documents/programs to an agent. McIllwaine, however, discloses a method/system for QA monitoring that directs agents to specific training materials and software based on monitoring results (*Col. 5, Line 52- Col. 6, Line 39; Col. 7, Lines 56-65; and Col. 10, Lines 4-14*).

Scarano, Katz, Walker, and McIllwaine are analogous art because they are from a similar field of endeavor in customer service analysis systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Scarano in

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view of Katz with the training material distribution means taught by McIlwaine in order to provide customized training to agents most in need of training (*McIlwaine, Col. 10, Lines 33-58*).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See PTO-892.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached at (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/James S. Wozniak/
Primary Examiner, Art Unit 2626